

Alice

Learning to program: Part Four
Creating Sounds, Making Billboards, Fun with 3-D Text,
New Events, and Rotating Objects
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Duke University, July 2008



www.cs.duke.edu/csed/alice/aliceInSchools

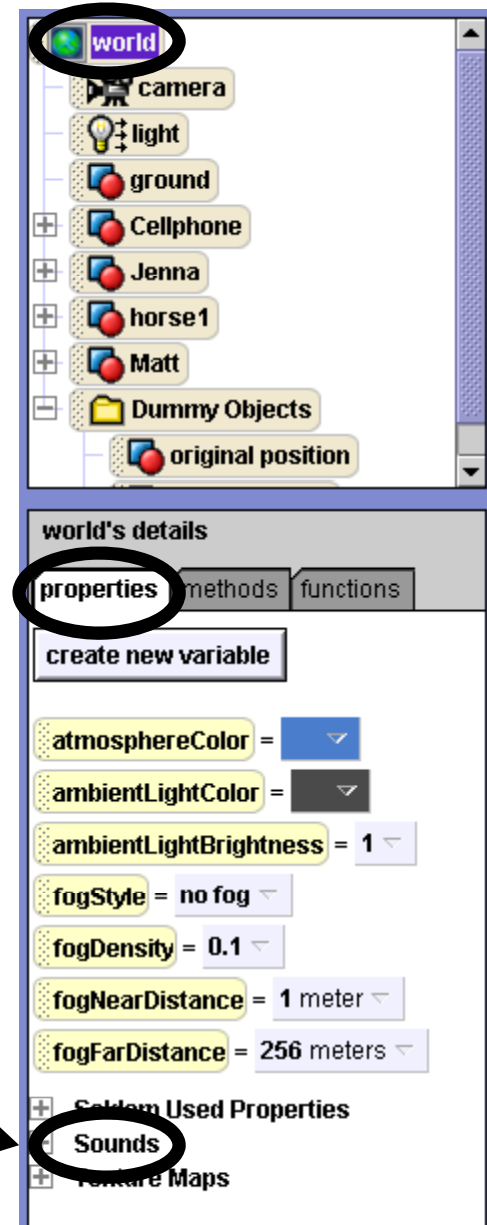
Creating a Sound in Alice

-We are now going to make your character actually speak.

-Click on **world** in the object tree.

-Go to the **properties** tab.

-Click on the plus sign next to **Sounds**.

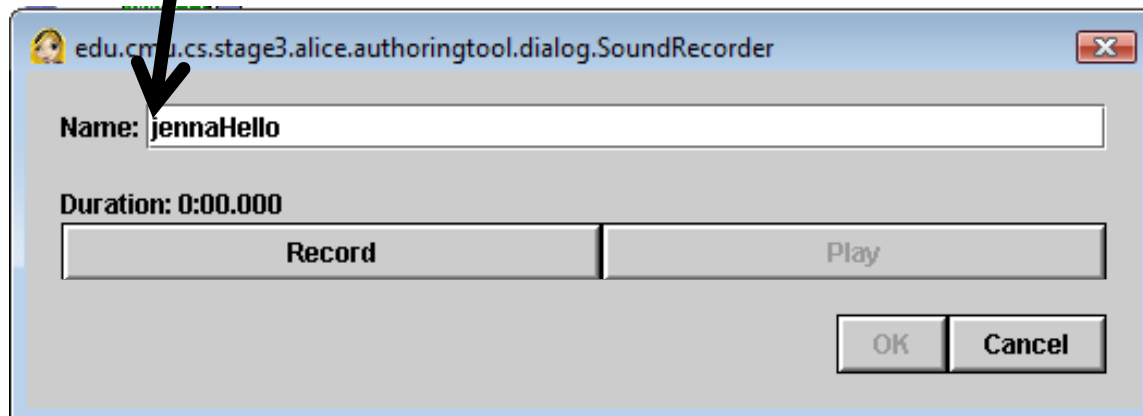
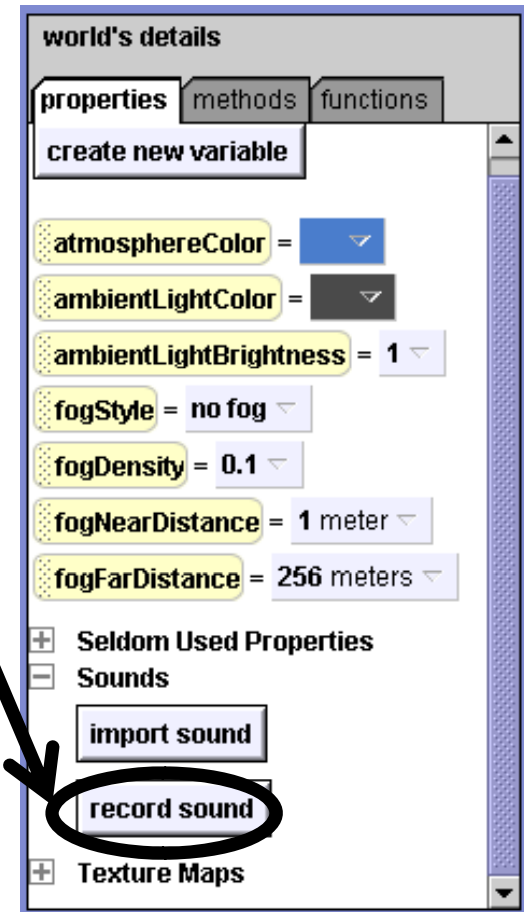


Naming the Sound

-Click on the **record sound** button.

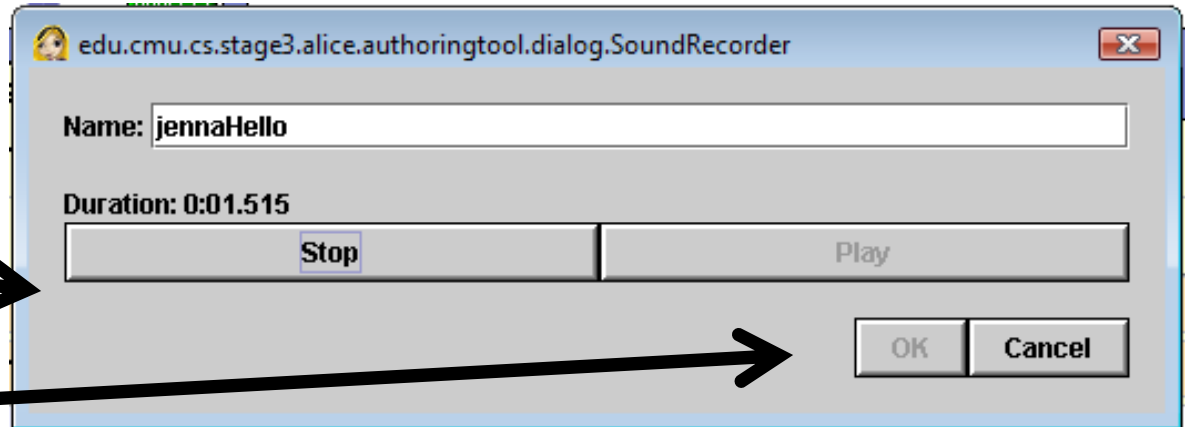
*(Make sure the volume on your computer is on)

-Type in a name for the sound file.
Call it **jennaHello**. We are going to make Jenna say “Hello?” when she answers her phone.



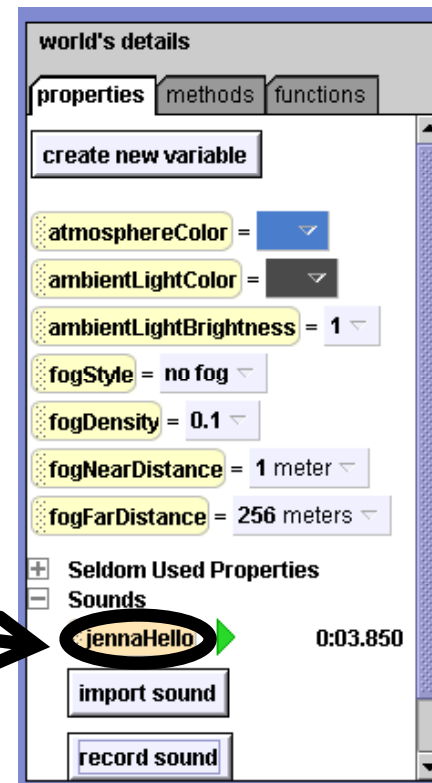
Recording the Sound

-Click **Record**, say “Hello?”, and then click **Stop** when you are done.



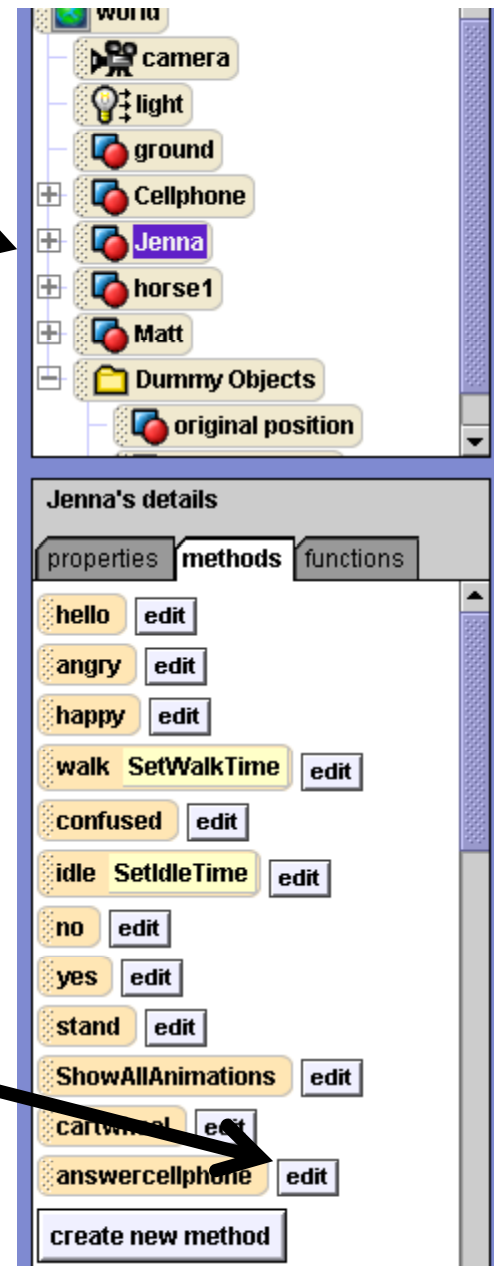
Click play to hear it. If you don't like it, record again and click ok.

-Your sound will appear on the **properties** pane under **Sounds**.

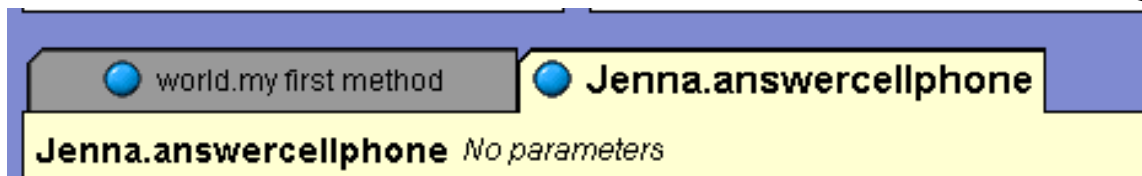


Editing answercellphone

-Click on **Jenna** in the object tree.



-Click on **methods**, and find **answercellphone**. Click on **edit** Next to that to see the code for **answercellphone**.



Adding the Sound to your Code



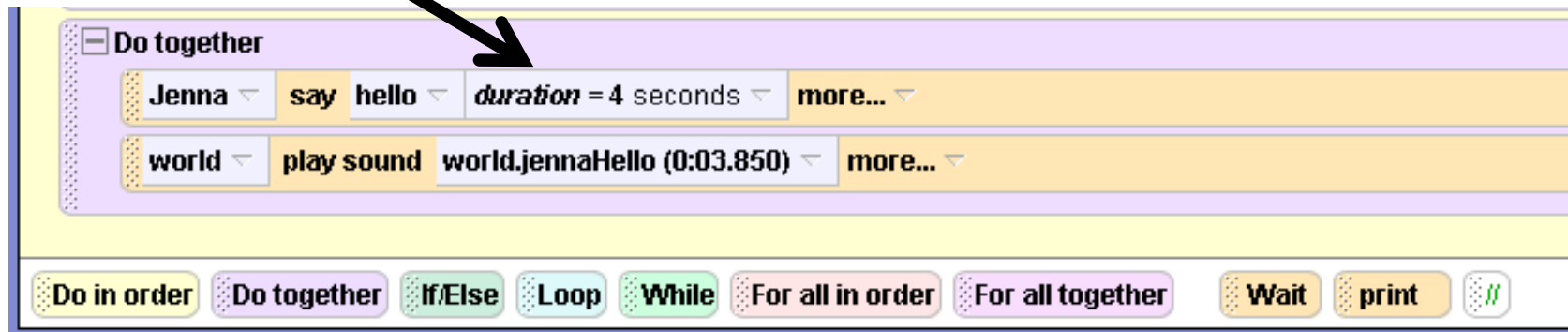
Drag a **Do together** into your code above your **Jenna say** and then drag the say method into it.



Find your sound again in world properties, and then drag it into the Do together with your say method.

Changing Duration

Set the duration of your **say** method so it matches approximately the length of your sound file.



Now your character can speak!
Play and try out the sound.

“As Seen By”



- “As Seen By” is a function that allows you to rotate an object around another object.
- We will make Jenna Circle around the horse.

As Seen By (Continued)

-First, drag a **camera set point of view to** command to the end of **my first method** and set it to **original position**, so you can see all your characters again at the end of your animation.

The screenshot shows the 'camera's details' panel on the left with tabs for 'properties', 'methods', and 'functions'. The 'methods' tab is active, displaying a list of camera commands. A black oval highlights the 'camera set point of view to' command. A black arrow points from this command to the script area on the right, where it is being added to the 'world.my first method' script. The script area shows a sequence of commands: 'Jenna.cartwheel', 'Jenna say I love cartwheels! duration = 2 seconds', a comment '// Jenna answers her phone and says hello, and then Ma', 'Jenna.answercellphone', 'camera turn to face horse1 more...', 'camera move backward 1.5 meters more...', 'Matt.RideHorse', 'camera set point of view to horse position more...', and finally 'camera set point of view to original position more...'.

camera's details

properties methods functions

camera move toward

camera move away from

camera orient to

camera turn to face

camera point at

camera set point of view to

camera set pose

camera stand up

camera move at speed

camera turn at speed

camera roll at speed

world.my first method No parameters

No variables

Loop 2 times times show complicated version

Jenna.cartwheel

Jenna say I love cartwheels! duration = 2 seconds n

// Jenna answers her phone and says hello, and then Ma

Jenna.answercellphone

camera turn to face horse1 more...

camera move backward 1.5 meters more...

Matt.RideHorse

camera set point of view to horse position more...

camera set point of view to original position more...

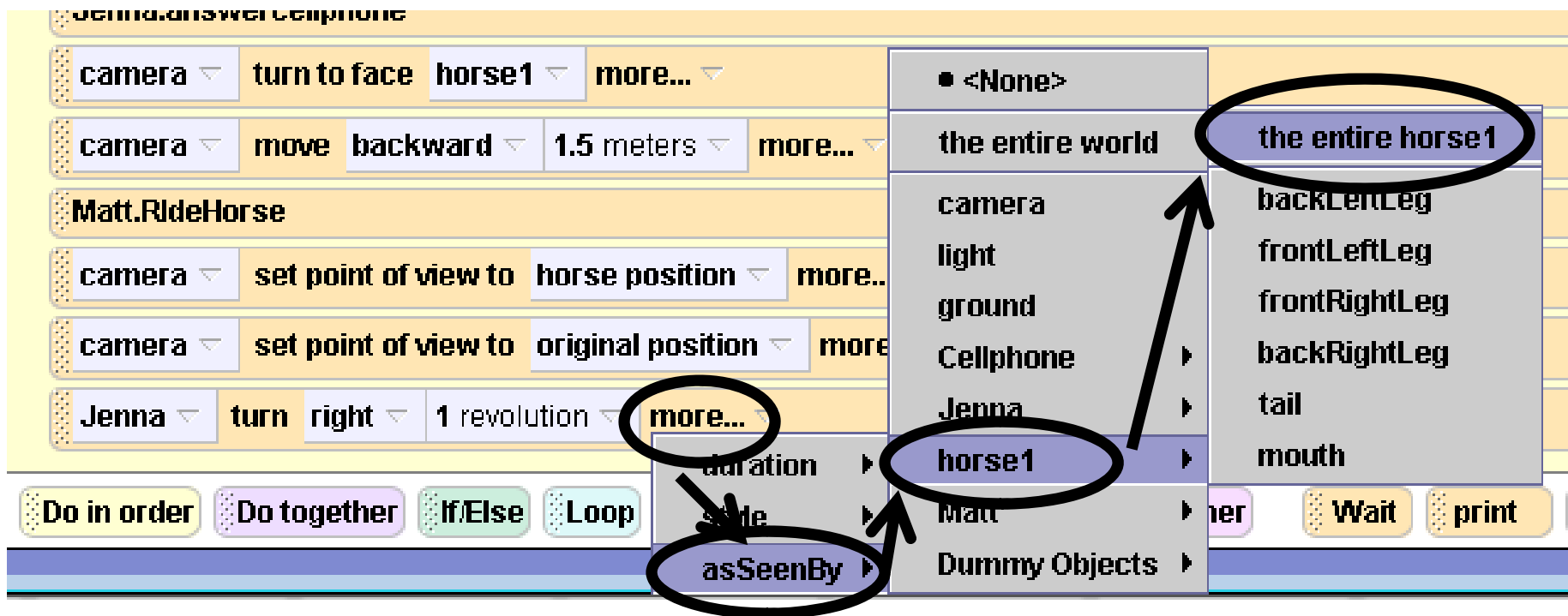
As Seen By (Continued)

Now, click on **Jenna** in the object tree and find her **turn** method. Drag and drop it at the end of **my first method**. Tell her to turn **right 1 revolution**.

The screenshot shows a programming environment with two main panels. On the left, the 'Jenna's details' panel has tabs for 'properties', 'methods', and 'functions'. Under the 'methods' tab, a list of methods for 'Jenna' is shown: 'move', 'turn', 'roll', 'resize', 'say', 'think', 'play sound', 'move to', 'move toward', 'move away from', and 'orient to'. The 'turn' method is circled in black. An arrow points from this 'turn' block to the script area on the right. The script area is titled 'world.my first method' and contains several blocks: a 'Loop 2 times' block with a 'Jenna.cartwheel' block inside; a 'Jenna say I love cartwheels! duration = 2 seconds more...' block; a green flag block with the text '// Jenna answers her phone and says hello, and then Matt gets c'; a 'Jenna.answercellphone' block; a 'camera turn to face horse1 more...' block; a 'camera move backward' block; a 'Matt.RideHorse' block; and a 'camera set direction' block. The 'camera set direction' block is open, showing a dropdown menu for 'direction' with options 'left', 'right', 'forward', and 'backward'. The 'right' option is circled in black. Another dropdown menu for 'amount' is open, showing options '1/4 revolution', '1/2 revolution', '1 revolution (all the way around)', and '2 revolutions'. The '1 revolution (all the way around)' option is circled in black. At the bottom of the script area, there are buttons for 'Do in order', 'Do to', 'Loop', 'While', 'For all in order', and 'For'.

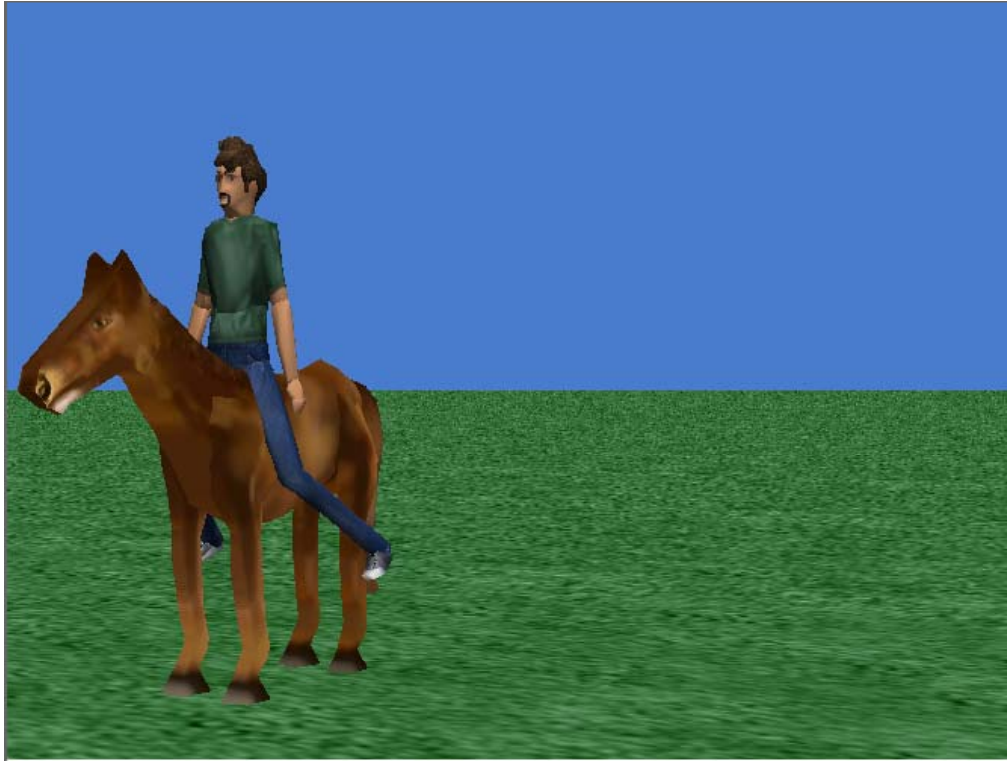
As Seen By (Continued)

Click on **more...** next to your **Jenna turn right** command. Select **asSeenBy** and then **horse1**.



Now play your animation to see what happens. Jenna should circle around the horse.

As Seen By (Continued)



- Try Changing the object after “as seen by” from the horse to the camera.
- Jenna should disappear off the right side of your screen and reappear on the left side.
- In this picture she is circling off screen, around the horse.

As Seen By Conclusion

- You can use “as seen by” to have an object rotate around another object.
- Whichever object you select first will do the rotating and whichever object you select after “as seen by” will be rotated around.
- Example: Jenna turn left 1 revolution as seen by the horse means that Jenna will rotate around the horse.

Making a Billboard

- We will now show you how to make billboards in Alice.

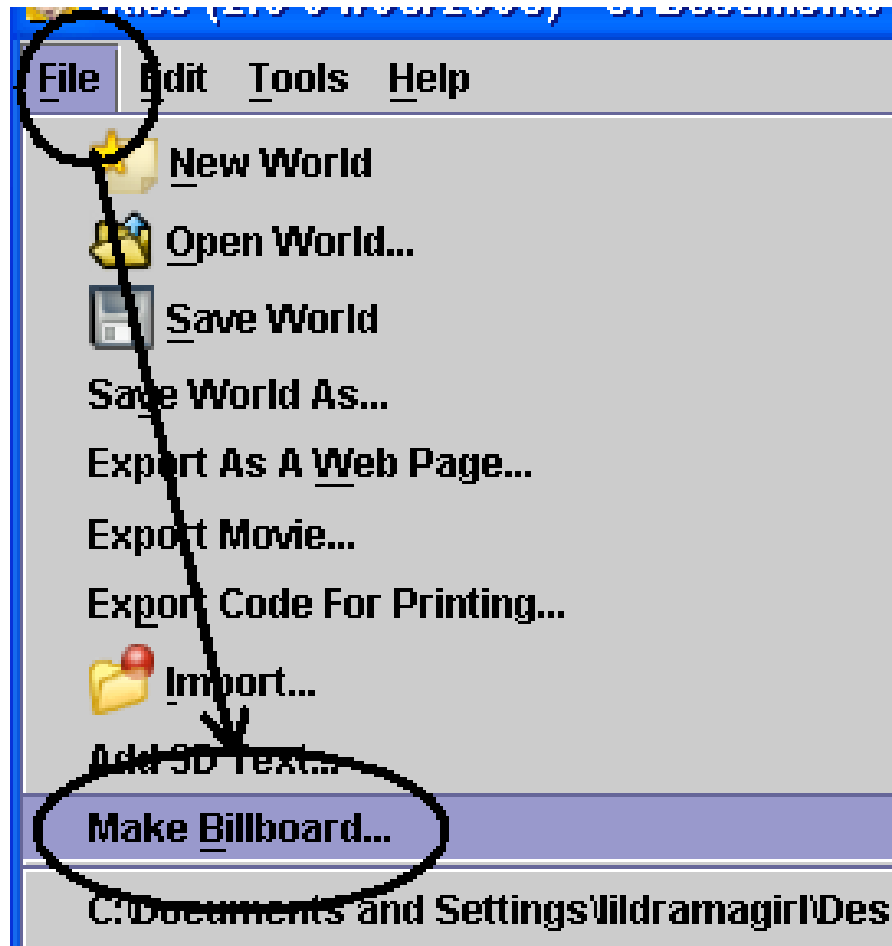
- This is a way you can take pictures that you make in Paint or find on the Internet and use them in your Alice world.

Getting Started

- Go online and find a picture that you like
- In this case it is a stable scene, taken from Google Images.
- Save this image onto your desktop or a folder that is easily accessible.
- Ours is saved on the desktop, as a .jpg



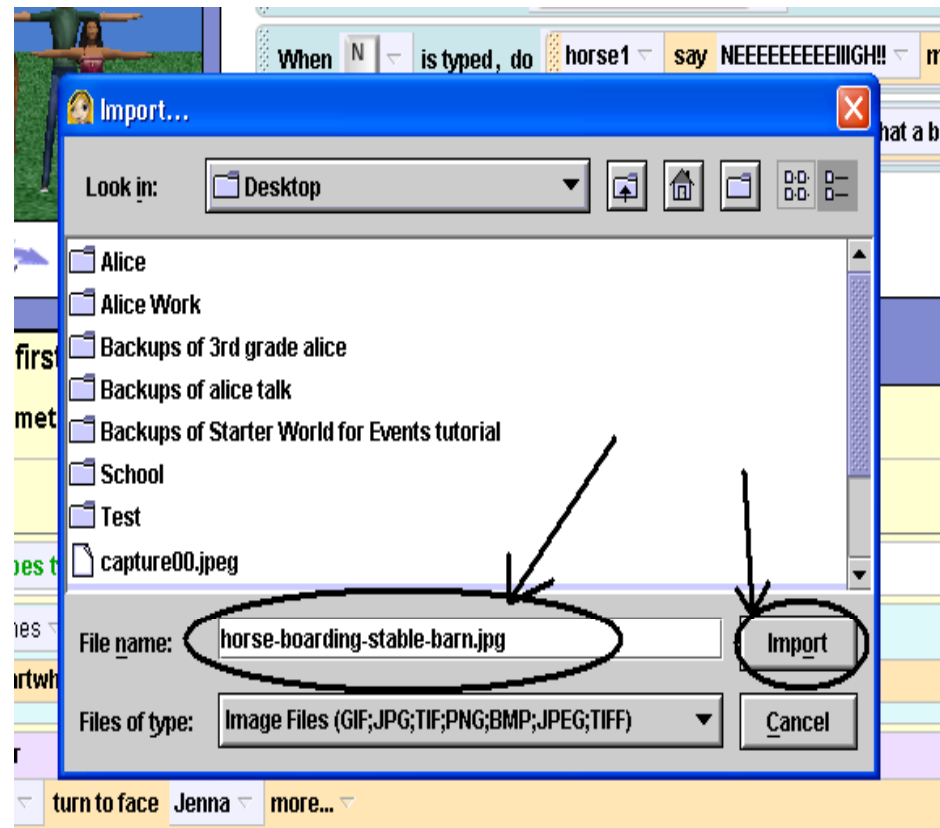
Billboards



- Now click on File and select “make a billboard.”

Billboard

- A pop up box will appear in the middle of your screen.
- Select the .jpg image from your desk top
- Select “import.”



Billboard

- This should import a small picture of your .jpg image into your Alice world (shown behind the people)



Billboards



- Now click on your billboard and stretch it out so that it is big enough to be the background to your animation.

3-D Text

Lets add some 3-D text to our world

This can say “That’s all folks”



- You can change the font below in this square.
- Once you have selected the font it will appear in your world.



3-D Text

- Your text should appear in your world like this.
- You can move it around using the buttons at the right.



- Your screen should look like this.

Coloring Your Text



- If you want to color your text you can go to the properties tab of your text and change the color
- It should automatically appear on your 3-D text, in your animation

Animating Your Text

You can animate your text to spin around, and do things just like any other object in your world, simply by writing a method. Let's write a new method to move the 3-D text in and spin it around.

Animating your Text

That's all Folks!!!!.Animate *No parameters*

No variables

That's all Folks!!!! ▾ set isShowing to true ▾ more... ▾

That's all Folks!!!! ▾ move forward ▾ 5 meters ▾ more... ▾

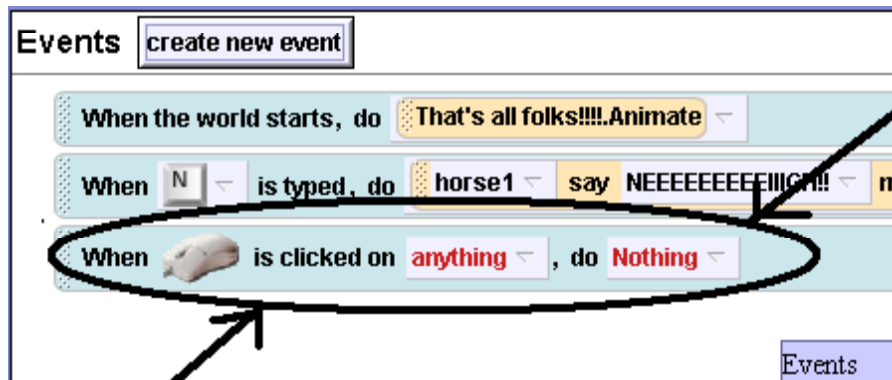
☐ Do together

☐ Loop 3 times ▾ times **show complicated version**

That's all Folks!!!! ▾ turn left ▾ 1 revolution ▾ *duration = 0.5 seconds* ▾ *style = abruptly* ▾ more... ▾

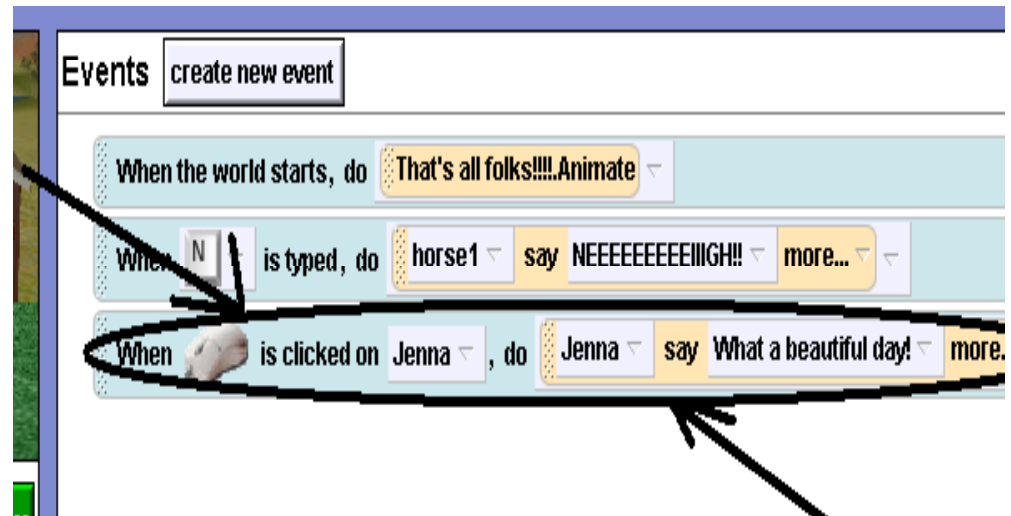
- Write a new class level method that looks like this.
- Call it “animate.”
- Change the event “when the worlds starts” to call the “animate” method and try it out!

New Events

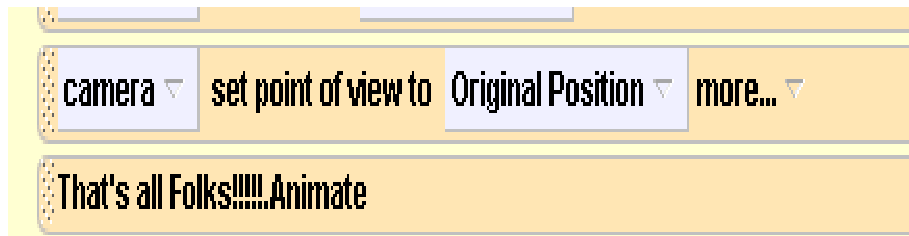


- Select “When the mouse is clicked on something.”
- When the mouse is clicked on Jenna, Jenna say “What a beautiful day”.

- Now lets try a different event.
- Try creating another simple event.



Wrapping up



- Change the event for “when the world starts” back to “myFirstMethod”
- Now your entire world should play as before with the 3-D text animating at the very end
- Finally lets add the 3-D text call to animate to our World.myfirstmethod.
- We need to set the camera back to “Original Position” and then call “That’s all folks.Animate”
- Add this to the very end of your world.myfirstmethod.

Now you should have two events in your animation



- Press “N” and click on Jenna when your story plays
- If you want to learn more about Events, see the “Events Tutorial”.

Congratulations! You now know much of what is possible in the Alice world. Explore on your own, and see what new things you can create and do! Feel free to try our other tutorials to learn more.

